ADVANCING ENVIRONMENTAL HEALTH THRU PARTNERSHIPS AND COMMUNITY-BASED PARTICIPATORY RESEARCH

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WEST HARLEM ENVIRONMENTAL ACTION

WE ACT FOR ENVIRONMENTAL JUSTICE

- WE ACT builds community power that improves environmental health, policy and protection in communities of color, low-income.
- Emerged in 1988 out of community struggles re: North River sewage treatment plant in West Harlem.
- Government accountability,youth leadership development,community organizing and education, CBPR, sustainable development.
- Part of national, global EJ Movement

Global Environmental Justice Movement

- **Challenged the disproportionate burden of environmental degradation and pollution on the health, well being of communities of color and low-income communities.**
- **Struggle for environmental justice by people of color, who bear the brunt of pollution in the US and around the world has escalated.**
- **Growing awareness that disparate burden contributes to disparities in health by race/ethnicity / social class.**

Env. Justice Efforts

- Efforts of the 1980's brought forth the *First National People of Color Environmental Leadership Summit*, held in Washington, DC, Oct. 24-27, 1991.
- Landmark summit attended by over 900 persons; developing 17 Principles of Environmental Justice
- In February 1994,President Clinton issued Executive Order 12898, which charged 11 federal agencies with developing policies and procedures to address the disparate impact of environmental hazards on communities of color and low-income populations.

- On the same day, in 1994 NIEHS hosted an *Interagency Symposium On Health Research Needs To Ensure Environmental Justice* in Arlington, VA.
- Attended by 1,100 persons, 400 of whom were EJ advocates.
- Dialogue resulted in appreciation of importance of community involvement in setting, implementing research agendas to address environmental justice issues.
- Acknowledgment that more attention and funding was needed to respond to egregious health disparities by race, ethnicity and social class.

- Need to respond to the disproportionate burden of pollution across communities, impacts of multiple and cumulative exposures, special concerns of susceptible populations, i.e. children, immuno-compromised, elderly.

- Scientists, community leaders agreed: work in partnership to prioritize research needs, get data, assess env.exposures, test interventions to influence public policy to protect the environment and the health of all

Some Progress Made

- Communities nationally, globally made some progress in effectively addressing environmental justice concerns.
- Govt. agencies and foundations funding community-university partnerships to conduct CBPR, a model rooted in community, physically,conceptually.

- In CBPR, scientists work closely with community partners involved in all phases of research, from inception of research questions, to study design, to collection of data, monitoring of ethics, and interpretation of study results.

COMMUNITY-BASED PARTICIPATORY RESEARCH

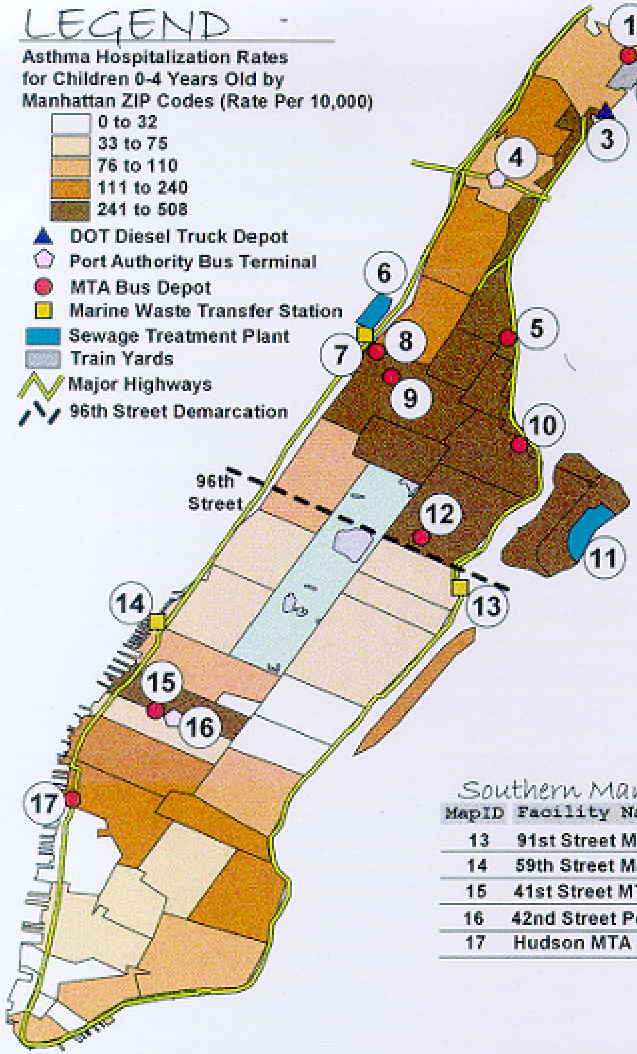
- Research findings communicated to broader community—residents, media, policymakers--so they can effect needed changes in environmental and health policy to improve existing conditions.

- Building upon existing strengths and resources, CBPR seeks to build capacity and resources in communities, and to ensure that government agencies and academic institutions are better able to understand and incorporate community concerns into their research agendas.

WE ACT Based In Northern MANHATTAN

- 7.4 sq. miles, over 600,000 people
- 86% African-American and Latino
- $16,000 median household income
- Excess mortality: asthma, cancer heart disease, learning disabilities
- Multiple environmental exposures
- Non-attainment area for clean air
- Highest asthma rates in nation

Polluting Facilities & Asthma Hospitalizations For Children 0-4 Years Old in Manhattan in 1996



Northern Manhattan Facilities

MapID	Facility Name
1	Kingsbridge MTA Bus Depot
2	MTA Train Yards
3	Department of Transportation / Division of Highways Diesel Truck Depot
4	George Washington Bridge Port Authority Bus Terminal
5	Mother Clara Hale MTA Bus Depot (Scheduled to Expand)
6	North River Sewage Treatment Plant / Riverbank State Park
7	135th Street Marine Waste Transfer Station
8	Manhattanville MTA Bus Depot
9	Amsterdam MTA Bus Depot
10	126th Street MTA Bus Depot
11	Wards Island Sewage Treatment Plant
12	100th Street Bus Depot (Scheduled to Expand)

Southern Manhattan Facilities

MapID	Facility Name
13	91st Street Marine Waste Transfer Station
14	59th Street Marine Waste Transfer Station
15	41st Street MTA Bus Depot
16	42nd Street Port Authority Bus Terminal
17	Hudson MTA Bus Depot (Scheduled to Close)

Source: 1996 NYC Dept. of Health SPARCS data on Asthma Rates for children ages 0 to 4, 1996.

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Map prepared by West Harlem Environmental Action, Inc. (WE ACT) with the Columbia Center for Children's Environmental Health (CCCEH), using ESRI ArcView® GIS v3.1. If you have any questions or concerns, please contact WE ACT at (212) 961-1000.

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WE ACT & Columbia -- 7 Years of Partnership

- Model of science and community-based action working to advance env. health policy.
- ’95 WE ACT awarded EPA Community-University Partnership Grant
- In “96, WE ACT became P.I. On NIEHS Env. Justice Thru Communications Grant
- Co-director, COEP, NIEHS Center for Env. Health In No. Manhattan
- Co-Investigator, Community Partner, Children’s Env. Health Center

Achievements: Building Community Capacity

- Trained 50 residents in Env. Health Leadership trainings
- Community-driven research on air pollution:*Diesel Exhaust Exposure Among Adolescents In West Harlem* (PI: Dr. Northridge)
- *Airborne Concentrations of PM2.5 and Diesel Exhaust Particles On Harlem Sidewalks* (PI: Dr. Kinney)
- WE ACT youth trained as field technicians

Earth Crew members (from left to right: Carl Willis, David Betancourt, Latanya Stevens and Felicia Reynolds) keep a close watch as they count the number of diesel buses and trucks rolling down the streets of Northern Manhattan.

UPTOWN EYE

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WE ACT for Environmental Justice. A Decade of ACTivism & ACTion.

Special Issue: Children's Environmental Health

ALL CHOKED UP:

Diesel Exhaust Exposure Among Adolescents in Harlem

by Joanne Yankura, MPH and Mary Northridge, Ph.D.

In 1998 concern was raised by members of the Harlem community when the Manhattanville bus depot was constructed on 139th Street, directly across from Intermediate School 43 in West Harlem. It was the sixth bus depot operated by the Metropolitan Transportation Authority (MTA) constructed in a Northern Manhattan neighborhood - - a seventh depot is located on 59th Street.

In 1994, WE ACT approached investigators at the Harlem Center for Health Promotion and Disease Prevention to request their assistance in determining what impact diesel exhaust might have on the community's health, especially on the respiratory health of its youth, a heavily exposed and vulnerable population. As a result, a study was designed in order to determine the background exposure levels to diesel exhaust and to measure baseline lung function of school aged Harlem youth.

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UPTOWN EYE

ALL CHOKED UP:

Diesel Exhaust Exposure Among Adolescents in Harlem

Continued from page 1

Who conducted this study?

The selected study group was seventh grade students at Thurgood Marshall Academy located at St. Nicholas Avenue and 135th Street. Appropriate approvals were obtained from the students' parents/guardians, the school's principal, Dr. Sandye O. Johnson, and the Institutional Review Board of Columbia University.

The study was conducted jointly by WE ACT staff -- Executive Director Peggy Shepard, Program Director Cecil Corbin-Mark, Youth Coordinator Luis Benitez -- and researchers at the Harlem Center for Health Promotion and Disease Prevention led by Dr. Mary Northridge and the Center for Environmental Health in Northern Manhattan, especially Drs. Patrick Kinney and Joseph Graziano.

The students' parents/guardian were informed of the study design and purpose at a pre-study meeting held at Londel's restaurant in Harlem to help address any questions or concerns among the parents/guardian regarding their child's participation in the study. Informed consent was obtained for each child; no parent or guardian refused participation.

Why was it important to examine the extent to which youth are exposed to diesel exhaust? What is diesel exhaust composed of?

Diesel exhaust has harmful effects on human health. Motor vehicles produce most of the diesel exhaust that pollutes the earth's environment. A total of 445 compounds have been identified in the particle and gaseous components of diesel exhaust emissions. Some of these compounds -- sulphur dioxide, nitrogen dioxide, particulate matter (soot) and gaseous hydrocarbons -- are emitted in amounts that have a known biological impact on human and environmental health. During combustion, unburnt carbon atoms from the carbon-rich diesel fuel form carbon particles that produce the sooty

Dr. Patrick Kinney

in the atmosphere, particles can greatly decrease visibility until rainfall clears the air. Particles contribute to the visible layer of dirty soot that coats buildings and other physical surfaces in urban neighborhoods. The outer layer of many buildings and monuments are permanently decayed when acidic particles land on them and produce corrosive chemical reactions.

How can diesel exhaust affect you? Who does it affect the most?

Long-term exposure to diesel exhaust in occupational studies suggests a 1.2 to 1.5-fold increased risk of de-

Exposure to diesel exhaust is greatest on streets and intersections heavily traveled by diesel buses and trucks.

On Tuesday, April 15th 1997, twenty-four students from Thurgood Marshall Academy traveled to Columbia University's Health Science Campus in order to participate in the study.

- Twenty-four students participated in the study by responding to a questionnaire.
- All of the students were from similar backgrounds.
- The average student age was 12.8 years (range 12-14).
- Twenty-three students considered themselves to be African American.
- One student considered himself

1) Questionnaire

A questionnaire was administered to each student by members of WE ACT's Earth Crew Youth Leadership Program, a community based outreach initiative for youth leadership development through environmental education and community service. The questionnaire requested demographic data (age, sex, race/ethnicity, address), information regarding exposure to tobacco smoke, and asthma history.

Key information reported on the questionnaire:

- Nine students - 38% - reported having mothers who currently smoke cigarettes.
- Nine students - 38% - reported having asthma.
- Two students identified themselves as current tobacco smokers, neither of whom reported a current history of asthma.

The number of students who re-

NIEHS Center COEP

- Human Genetics, Ethics, and Communities of Color national conference Feb. 2002
- Brought 400 scientists, community activists together in dialogue to learn, make recommendations
- Published proceedings and community recommendations
- Guest edited EHP monograph, *Advancing Env. Justice Thru CBPR, and will publish similar lay journal for community residents/ organizations*

NIEHS Center/ COEP

- Developed traffic / Public Health Curriculum: Supplemental grant awarded to USC/UCLA Center COEP and Columbia COEP
- Currently, thru supplemental grant WE ACT will translate air data gathered by NIEHS Center after 9/11 into fact sheets for public
- Youth mentoring with center researchers and clinicians

Columbia Children's Center for Env. Health

- Developed strong Comm. Adv. Bd.
- Developed materials for *Healthy Home Healthy Child* Campaign
- Coordinated Wash. Hts. Health Fair for 300 parents/ children
- Town Hall meetings to identify community concerns.
- 1st NYC national conference on Children's Environmental Health

CCEH Working To Identify Env. Exposures of Mothers and Children

- WE ACT member of administrative core of investigators
- Monitors ethical issues, concerns arising from study findings, design
- Coordinating NYC community conference to report findings
- Developing PSAs for radio, media and policymakers briefings

Leveraging Partnerships

- Building community coalition partnerships on genetic concerns
- Developing national collaborations on children's env. Health
- EPA project with NYS DEC and the Manhattan Boro President on real-time air monitoring, reporting of black carbon, ozone, PM2.5 in Harlem, Wash. Hts.
- Before / after diesel depot monitoring

Benefits of Partnerships

- Research and interventions responsive to community concerns
- Improved resident recruitment, and retention
- Basic research translated into lay language for residents
- Knowledge is power: data used to support community campaigns to improve env. Health.

Challenges

- Trust-building is long process.
- Resource and power imbalance.
- Different institutional structures, timelines and world views.
- Community groups, researchers overcommitted, under-resourced.
- Research – advocacy tension.
- Genuine participation starts in research planning phase.

Recommendations

- Develop communication structures with multiple community institutions
- Integrate outreach activities into existing communication structures and community events.
- Communicate findings in context to participants, the public.
- Coordinate ongoing briefings for policymakers, residents.

Recommendations:Build Lasting Partnerships

- Conduct community-university cultural exchange
- Think of partnerships as long-term relationships not short-term projects.
- Develop core of residents/leaders versed in scientific concepts and monitoring tools.

- Build community capacity by housing community research staff at the CBO not at the university.

Building Community Capacity: Needs

- House community research staff at CBO not at university.
- Be willing to provide expert testimony for local campaigns, press conferences, hearings.
- In-house expertise on technical issues.
- Foster youth, local empowerment

Translational Research Is A Necessity

- None of these partnerships or research is worth the tax dollars spent if it does not advance public policy, and improve environmental health and protection.